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Public-Private Partnership in the sphere of Energy Efficiency Enhancement

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ABSTRACT

The sixth technological way forms essentially new trends of technological development in world economy. It predetermines need of transition of national innovative systems to qualitatively higher standards of functioning. The major part at the same time is assigned to state bodies which through use of various mechanisms have to influence processes of formation and development of points of perspective innovative growth purposefully. One of such mechanisms is the public-private partnership. Specifics of its realization in the context of a solution of the problem of activation of innovative processes in the sphere of increase in energy efficiency are considered in this article. As a result of the conducted research it is established that use of capacity of public-private partnership predetermines need of modification and additions in the standard and legal base regulating an order of interaction between various parties of partnership. It is proved that creation by the public partner of conditions which would guarantee to the investor obtaining a certain rate of return in the stipulated terms has to be among such changes. Implementation of such scenario of succession of events will become possible after creation of specialized funds of insurance of the budgetary obligations which activity will allow to level risks of a high debt load of regions. In article point that formation by the owner of public infrastructure of adequate requirements in relation to investment obligations of the private partner predetermines expediency of creation of the system of a benchmarking regulating an order of definition of values of parameters of development of objects of public-private partnership, an exit to which has to be provided with his operator, is made.

Keywords: sixth technological way, priorities, energy efficiency, management, public-private partnership

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1. INTRODUCTION

Transition of the Russian economy to model of the advancing innovative development transforms Wednesday and a format of interaction of the main participants of innovative process. The projected configuration of a control system of innovative activity operates with long-term priorities which achievement is intended to promote creation in global economy of the new technological markets with the subsequent domination on them the Russian companies (Melnik, A.N., Mustafina, O.N., Sadriev, A.R. 2015). In logic of this scenario of development in Russia the development of the state program of measures for support of development of perspective branches which received the name of the national technological initiative (NTI) is organized. The strategic reference points of implementation of innovative activity designated in NTI at the following level of management have to lean on the technological platforms representing the communication instrument of activation of efforts of various parties on creation of perspective technologies and also on development of new products and services. Such parties are business, science, the state and civil society. Their balanced interaction is a necessary condition and the most important driving force of innovative processes in economic systems of any level.

Considering value planned within NTI and technological platforms of innovative developments, the delayed nature of obtaining the expected economic effect and uncertainty of the possibility of its receiving, the defining role, first of all, of the state as in formation of bases of relationship between subjects of innovative activity, and in their regular motivation to conducting such activity looks natural. At more mature stages of realization of innovative process in process of cultural development of innovative business and formation of a full-fledged ecosystem of innovations participation of the state will be inevitable to decrease, providing achievement and preservation of steady balance in a matrix of interests of subjects of innovation of activity.

However the conditions of development of the Russian economy which developed today demand serious intervention from the state not only regarding formation of priorities of innovative business, but also in the sphere of realization of concrete measures of support of the enterprises and organizations which are carrying out innovative activity (Melnik, A.N., Ermolaev, K.A., Antonova, N.V. 2014; Melnik, A.N., Lukishina, L.V., Sadriev, A.R.2015 ; Melnik, A.N., Mustafina, O.N. 2014). One of such measures which potential remains not

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realized yet the public-private partnership (PPP) is (Zhang, X. 2005 ; Bougrain, F. 2012 ; Antonini, E., Longo, D., Gianfrate, V., Copiello, S.2016).

2. METHODS

The research of the practice of PPP which developed in Russia was conducted on the basis of use of the existing standard and legal base regulating an order of development of objects of public infrastructure, the analysis of results of the state policy pursued in this field of activity and also monitoring of opinion of heads of the enterprises and organizations concerning the maintenance of this problem. During performance of a research the analysis of the developed mechanisms of public-private partnership which gained distribution worldwide was carried out. It allowed to generalize the main problems accompanying use of PPP at implementation of innovative projects and to offer system approach to its integration into system of innovative development of national economy. Organizational basics of realization of the offered approach were covered in relation to the innovative projects realized in the sphere of energy saving and increase in power efficiency.

3. RESULTS AND DISCUSSION

According to the standard definition it is accepted to understand set of forms of average and long-term interaction of the state and business for the solution of socially significant tasks on mutually advantageous conditions as PPP. Objects around which process of PPP is built traditionally are the infrastructure branches feeling the need for investments and competences of administrative and technological profiles. Despite long history of existence in the Russian economy of the mechanism of PPP, real return from its realization began to be shown only in recent years. It is connected, first of all, with development of the relevant standard and legal base which fundamental documents are considered the Federal law of 13.07.2015 as No. 224-FZ "About public-private partnership …" (About public-private partnership, 2016) and the Federal law of 21.07.2005 No. 115-FZ "About concession agreements" (About concession agreements: feeder. the law of July 21, 2005). In many respects thanks to it the number of annually realized projects within PPP during the period from 2013 to 2016 grew with average annual rates in 124,5%, having increased from 86 projects in 2013 to 2183 projects in 2016 (A research "Development of public-private partnership in Russia in 2015-2016). Change of volume of the corresponding private investments which increased since the beginning of 2016 on February, 2017 up to 640,3 billion rubles ($10,6 of billion) at the total value of capital

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investments in projects of PPP in 1,039 trillion rubles ($17,13 of billion) which were distributed, first of all, among objects of transport infrastructure (714,4 billion rubles ($11,8 of billion)) and municipal and power economy (387 billion rubles ($6,4 of billion)) (Public-private partnership in Russia 2016-2017) became natural reflection of it. In table 1 the developed organizational bases of functioning of the mechanism of PPP in many respects predetermined achievement of the specified results are opened.

Table 1 - Organizational basis for public-private partnership formation in Russia

(Regional PPP standard of v. 2.0: Main steps of formation of comfortable conditions for initiation and implementation of projects of PPP. (Electronic resource): Access mode: http://pppcenter.ru/assets/docs/region_gchp_standart.pdf, free. - (date of the address: 19.05.2017).-Zagl. from the screen.

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Organizational basis

Characterization

Object

- public infrastructure:
  - 115th Federal law refers to it 20 types of objects
  - 224th Federal law - 18 objects

Subject

- public partner (state, regional and municipal authorities)
- private partner (organizations, in whose capital the state does not accept the predominant participation)

Purpose

- development of public infrastructure on the basis of long-term interaction between the state and business

The legislative framework

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- federal level of management - 224th Federal law (about PPP), 115th Federal law (about concessions), 13 typical concession agreements
- regional level of management level - 67 laws about PPP in Russian regions

Regulatory forms

- PPP agreements (224th Federal law)
- concessions (115th Federal law)
- production sharing agreements

Realization terms

- 3-30 years
- average term - 13,1 year (on concessions)

Accounting rate of return

- 15-25%

Financing terms

- full/partial financing of a PPP facility by a private partner

Post use conditions

- transfer of PPP object management to a public partner
- transition of the PPP object to the ownership of a private partner

Coordinators

- Ministry of Economic development; Autonomous non-profit organization "National center of PPP", Russian chamber of Commerce and Industry's Committee on PPP
- regional and municipal authorities

High level of wear of their fixed assets, and also technological backwardness of the corresponding engineering systems remains a common problem of functioning of the Russian infrastructure branches. Most sharply this problem proves within infrastructure of generation, transfer and distribution of energy and systems of its production consumption. Low level of energy efficiency in structure of a technological chain of power supply and energy consumption turned out to be consequence of lack of due consideration to the solution of this problem. Now it was one of the most conservative fields of activity in many respects limiting forward development of national economy (figure 1). Meanwhile, scientific and technical progress already provides the innovative solutions allowing not only to transform technical

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and technological base of power systems, but also to transform the concept of their development, having radically changed idea of energy efficiency. In this regard the mechanism of PPP can be considered as the instrument of activation of innovative processes in capital-intensive and knowledge-intensive branches of economy. Via the mechanism of PPP the state can operate innovative activity in the country, defining conditions of access for private investors to development of infrastructure facilities both from the point of view of financial and economic indicators, and from a position of need of achievement by operators of these objects of values of the technical and technological parameters corresponding to the level of leaders innovative practicing.

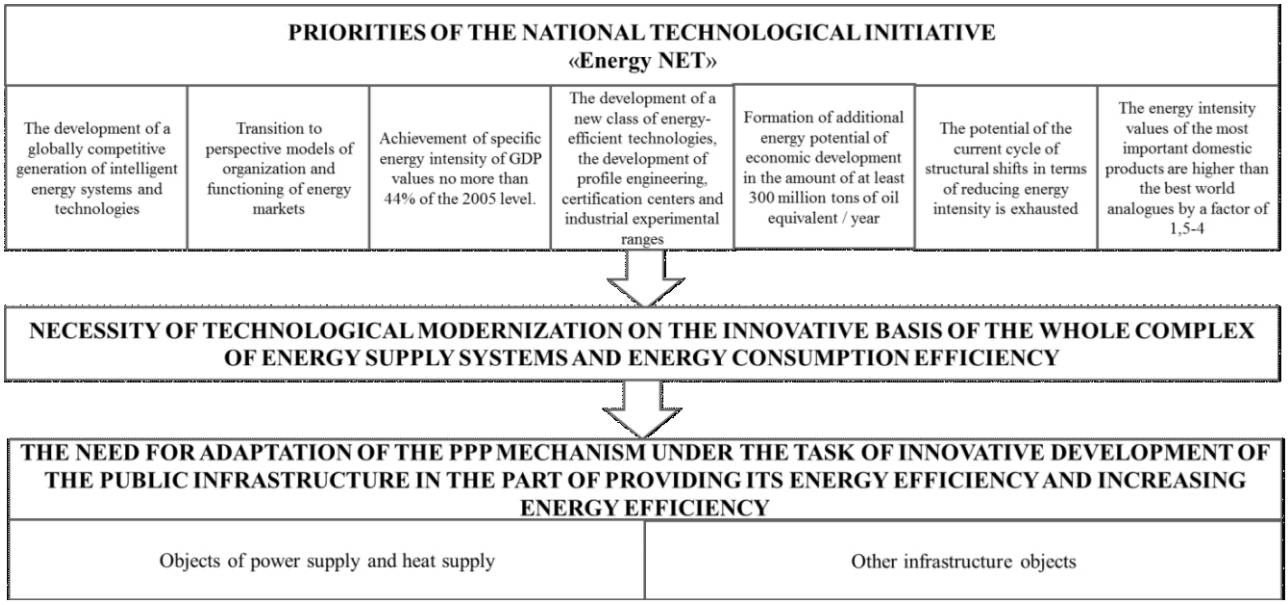

Fig 1. Place and role of PPP in the system of implementing the priorities of innovative development in the field of energy efficiency

The investments aimed at the innovative development of infrastructure in many respects form a reserve for perspective technological breakthrough for which the national economy prepares now. This reserve will consist in ensuring with infrastructure conditions development of all branches and fields of activity, and also in formation of the market of innovative production, demand for which the enterprises serving infrastructure facilities within PPP projects could generate.

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Besides, it is necessary to consider that the problem of creation of necessary concentration of innovatively active mass of subjects of business always was key for all national economies. In this sense the regulation of conditions of access of private business to operation of state ownership regarding parameters of its innovative development, is capable to give rather real impetus to the solution of this problem.

In the figure 3 key parameters of development of PPP projects in the sphere of power infrastructure are presented. As appears from the submitted data, the power as a part of the municipal sphere in general is one of the main infrastructure facilities around which service long-term partnership between the state and business is built up.

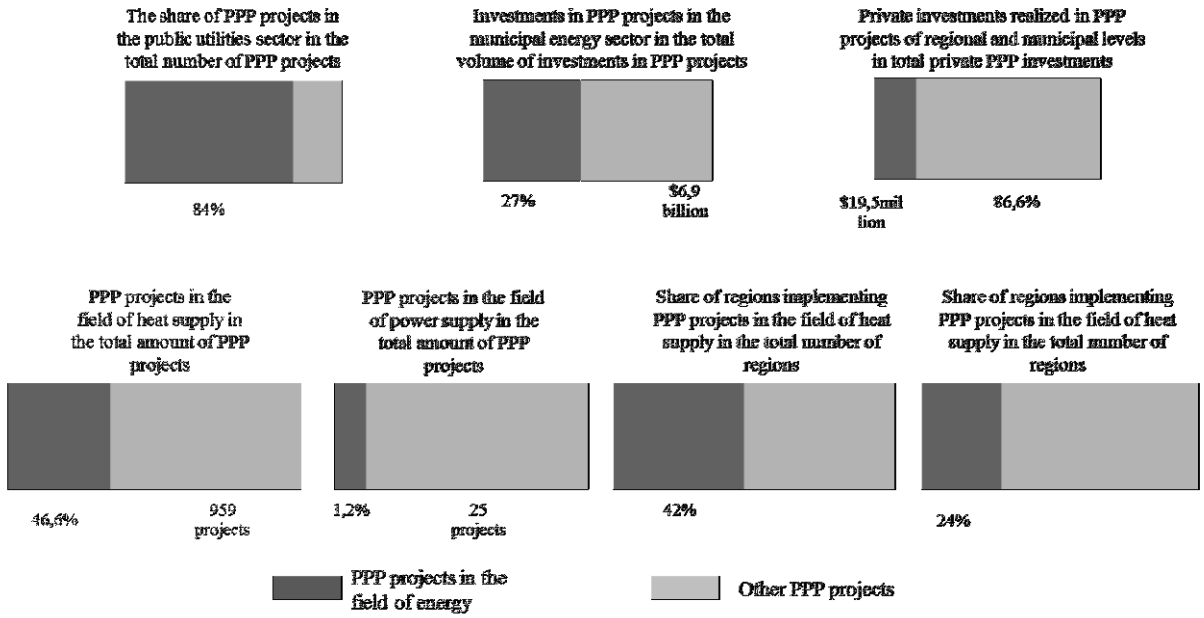

Fig 3. The fundamentals of PPP projects implemented in the communal and energy sector (built according to non-profit partnership "PPP Development Center" and "IPT Group" (A private initiative in concessions: the international experience and the prospects of formation in Russia. (Electronic resource): Access mode: http://pppcenter.ru/assets/docs/Initiative-A4-Block_20-04-2015_web ++. pdf, free. - (date of the address: 19.05.2017).-Zagl. from the screen.**)**

4. SUMMARY

Having designated the directions of PPP and having disclosed their content, the state should concentrate on realization of the motivational mechanisms allowing increasing interest of business to partnership within development of infrastructure in more rigid, than now a format.

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In the course of development of such mechanisms the state should concentrate the efforts on the solution of the following main problems.

First, implementation of innovative projects is in many respects limited to the standard and legal documents defining technological bases of functioning of infrastructure branches. Often these documents have the character which is not allowing deviations, providing accurate respect for certain norms and rules. From the point of view of maintenance of stability of their functioning existence of such regulating base is represented very important and even necessary condition. However, from a position of transition of world economy to the sixth technological way existence of such restrictions is capable to undermine the long-term prospects of economic growth. In this regard there is a need of realization of more weighed policy for technological regulation of developments of the infrastructure allowing a deviation from earlier accepted technological standards.

Secondly, considering the scale of infrastructure facilities and depth of problems of their functioning, risks of investment into these objects from private partners significantly increase. In case of need of development of infrastructure facilities on the basis of introduction of innovative developments of value of risks become critical, forming negative signals for potential investors. In this regard special importance is gained by a problem of creation by the public partner of conditions which would guarantee to the investor obtaining a certain rate of return in the stipulated terms. Fully implementation of such scenario of succession of events will become possible after creation of specialized funds of insurance of the budgetary obligations which activity will allow to level risks of a high debt load of regions.

Thirdly, formation by the owner of public infrastructure of adequate requirements in relation to investment obligations of the private partner predetermines expediency of creation of the corresponding system of a benchmarking regulating an accurate order of definition of values of parameters of development of objects of PPP, an exit to which has to be provided with his operator. The solution of this important task has to be followed by creation of the databases consolidating global information about best reached and about perspective values of parameters of functioning of technological systems.

5. CONCLUSION

Realization of priorities of innovative development predetermines need of search of new organizational mechanisms of activation of innovative processes for various branches and

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fields of activity of economy. One of such mechanisms is the public-private partnership, it is advisable to which possibility to orient on innovative modernization of public infrastructure. One of priorities of innovative development within which activities for realization of new formats of public-private partnership can be developed is increase in energy efficiency. Functioning of systems of power supply and energy consumption with their low technological efficiency and high level of wear are the most conservative link in a chain of the problems constraining innovative modernization of economy. Realization of capacity of PPP regarding its use for activation of innovative processes in domestic economy predetermines need of entering of a number of changes and additions into the standard and legal base regulating an order of interaction between various parties of partnership. Among them are the most important the extension of the list of objects of PPP assuming inclusion in their structure not only infrastructures of power supply, but also systems of energy consumption; encumbrance of private partners by obligations for achievement of target values of indicators of innovative development of the objects operated by them, and also development of instruments of decrease in risks and ensuring a certain standard of profitability for subjects of partnership.

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